

WHAT IS CLAIMED IS:

1. A computer-implemented method for treating a patient, comprising:
digitally scanning a patient's teeth;
analyzing the scanned data;
5 planning the treatment;
fabricating a device to treat the patient; and
incorporating treatment outcome as feedback.
2. The method of claim 1, further comprising scanning the teeth using one of a
10 digital camera, an X-ray scanner, a computer-aided tomographic (CT) scanner, and a
magnetic resonance imaging (MRI) scanner.
3. The method of claim 1, further comprising separating each tooth from the scanned
teeth.
- 15 4. The method of claim 1, further comprising manipulating and setting each tooth in
a desired tooth position.
5. The method of claim 1, further comprising generating one or more staging
options to move the teeth.
- 20 6. The method of claim 1, further comprising:
generating an image of the teeth in its desired position; and
merging the image of the teeth in its desired position with a patient image.

7. The method of claim 1, further comprising allowing measurements to each tooth.
8. The method of claim 1, further comprising milling each appliance from a polymeric material.
9. The method of claim 1, further comprising thermal forming each appliance.
- 5 10. The method of claim 1, further comprising forming one or more wires to move the teeth.

11. The method of claim 1, further comprising cutting, trimming and polishing the appliance.

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12. The method of claim 1, wherein the appliance is prepared using a laser machine.

13. The method of claim 1, wherein the appliance is prepared using a milling machine.

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14. The method of claim 1, further comprising shelling a negative of the appliance.

15. The method of claim 1, further comprising shelling a positive of the appliance.

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16. The method of claim 1, further comprising shelling the aligner from a bio-compatible resin.

17. The method of claim 1, further comprising thermal setting the appliance.

18. The method of claim 1, further comprising:

applying a thermal set material to form the appliance; and

5 preparing the appliance for use.

19. An apparatus for treating patient, comprising:

a data capture module,

an analyzer module;

10 a treatment planning module;

a treatment fabrication module to control a fabrication machine; and

a treatment feedback module; and

means for configuring equipment from one or more vendors and communicating data
among the modules.

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20. The apparatus of claim 19, wherein the fabrication machine mills the appliance
from a block of polymeric material.

21. The apparatus of claim 19, wherein the fabrication machine is a thermal forming

20 machine.

22. The apparatus of claim 19, further comprising a trimming machine to receive and
trim the appliances.

23. The apparatus of claim 19, wherein the trimming machine is a laser machine.
24. The apparatus of claim 19, wherein the trimming machine is a milling machine.
25. The apparatus of claim 19, wherein the fabrication machine shells a positive version of an appliance.
- 5 26. The apparatus of claim 19, wherein the fabrication machine shells a negative version of an appliance.
27. The apparatus of claim 19, wherein the fabrication machine fabricates appliances using a bio-compatible resin.
28. The apparatus of claim 19, wherein the fabrication machine comprises a thermal
10 setting machine.
29. The apparatus of claim 19, further comprising a virtual health-care electronic commerce community, including:
a network to communicate information relating to the community;
one or more patients coupled to the network;
15 one or more treating professionals coupled to the network; and
a server coupled to the network, the server storing data for each patient and performing patient data visualization in response to a user request.
30. The apparatus of claim 29, wherein the treating professional views one or more of the following patient data visualization over the network: a right buccal view; a left
20 buccal view; a posterior view; an anterior view; a mandibular occlusal view; a maxillary occlusal view; an overjet view; a left distal molar view; a left lingual view; a lingual incisor view; a right lingual view; a right distal molar view; an upper jaw view; and a lower jaw view.

31. The apparatus of claim 29, wherein the treating professionals include dentists or orthodontists.

32. The apparatus of claim 29, further comprising one or more partners coupled to the network.

5 33. The apparatus of claim 29, wherein the partners include a financing partner.

34. The apparatus of claim 29, wherein the partners include a supplier.

35. The apparatus of claim 29, wherein the partners include a delivery company.

36. The apparatus of claim 29, wherein the treating professionals perform office management operations using the server.

10 37. The community of claim 8, wherein the office management operations include one or more of the following: patient scheduling, patient accounting, and claim processing.

38. The apparatus of claim 29, wherein the patients and the treating professionals access the server using browsers.

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39. A computer-implemented method for performing dental-related electronic commerce, comprising:

capturing dental data from one or more third-party scanners;

communicating treatment data among one or more modules supplied by different

20 vendors using XML;

displaying a three-dimensional computer model of the teeth at the treating professional computer using a browser;

selecting a vendor based on the vendor's treatment modality and transmitting the computer model from the treating professional computer to the vendor's server; and generating an appliance to treat the patient based on the computer model of the teeth.

5 40. The method of claim 39, wherein the vendor fabricates either a dental wire customized to a patient or an appliance having a geometry selected to reposition the teeth from a first to a second arrangement

10 41. The method of claim 40, further comprising marking at least some of the wires or appliances to indicate their order of use.